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10/561,317

12/20/2005

John Stark

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EXAMINER

WEINSTEIN, LEONARD J

ART UNIT

PAPER NUMBER

3746

MAIL DATE

DELIVERY MODE

01/02/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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|------------------------------|---|------------------------------------|--|
| Office Action Summary | Application No. 10/561,317 | Applicant(s) STARK, JOHN | |
| | Examiner LEONARD J. WEINSTEIN | Art Unit 3746 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-12 is/are pending in the application.
- 4a) Of the above claim(s) 1-8 and 13-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to the amendment of August 14, 2008 and September 25, 2008. In making the below rejections and/or objections the examiner has considered and addressed each of the applicant's arguments.
2. The examiner acknowledges the amendments to claims 9-12.

Specification

3. The disclosure is objected to because of the following informalities: the corrections submitted in the response of August 14, 2008 includes the addition of reference number 114 at page 2 line and reference numeral 312 at page 9 line 5. These appear to be corrections that should include reference numerals 112 and 310 respectively since reference numerals 114 and 312 do not appear in any prior or replacement figures. The examiner notes that the context of the disclosure surrounding the references in question also suggest the applicant was attempting to reference previously disclosed elements 112 and 310.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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6. Claim 9 recites the limitation "the porous section" in line 6. There is insufficient antecedent basis for this limitation in the claim. As best understood by the examiner the limitation cited will be considered to be --- the second porous diverging section --- for the purposes of the office action on the merits that follows.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claim 9 is rejected under 35 U.S.C. 102(b) as being anticipated by Frenzl US 3,823,872. Frenzl teaches all the limitations as claimed for a double cone-device of continuous geometry (with reference to the inner walls of the actually double-cone nozzle which define a primary fluid path) including: **[claim 9]** a first tapering section 2a of hollow frustoconical shape, a second porous diverging section (18, 22) of hollow frustoconical shape extending from the smaller diameter end 3a (as the distal end of element 3a has a smaller diameter than the front edge of element 2a defined at frontal edge of the block defined by element 17) of the first tapering section 2a, capable of achieving suction, and a third diverging section 20 of hollow frustoconical shape, extending from the larger diameter end 22 of the porous section (18, 22).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Frenzl

US 3,823,872. Frenzl teaches all the limitations as discussed including a conical angle

of a first tapering section 2a is greater than 0° , but Frenzl does not explicitly teach a

conical angle that is less than or equal to 10° . It would have been obvious to one

having ordinary skill in the art at the time the invention was made to form a first tapering

section with a conical angle that is greater than 0° but less than or equal to 10° , since

the claimed values are merely an optimum or workable range. It has been held that

where the general conditions of a claim are disclosed in the prior art, discovering the

optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ

233.

12. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Frenzl

US 3,823,872. Frenzl teaches all the limitations as discussed including a conical angle

of a third diverging section 20 is greater than 0° , but Frenzl does not explicitly teach a

conical angle that is less than or equal to 10° . It would have been obvious to one

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having ordinary skill in the art at the time the invention was made to form a third diverging section with a conical angle that is greater than 0° but less than or equal to 10° , since the claimed values are merely an optimum or workable range. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

13. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Frenzl US 3,823,872. Frenzl teaches all the limitations as discussed including a second porous section (18, 22) having an end 22 with a larger diameter, the larger diameter being greater than a smaller diameter of the smaller diameter end 3a of the first tapering section 2a. Frenzl does not explicitly teach that an end 22 of a second porous section (18, 22) has a diameter that is less than one and a half times larger than the smaller diameter end 3a of a first tapering section 2a. The smaller end of the first tapering section of the double cone nozzle taught by Frenzl transitions into the first end of a porous diverging section. The porous diverging section has a second end with a larger diameter than a first end. It would have been obvious to one having ordinary skill in the art at the time the invention was made to form a larger diameter second end of a porous diverging section of a double cone nozzle to be less than one and a half times larger than a small diameter end of a first tapering section that transitions into the first end of the porous diverging section, since the claimed values are merely an optimum or workable range. It has been held that where the general conditions of a claim are

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disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Response to Arguments

14. Applicant's arguments filed August 14, 2008 have been fully considered but they are not persuasive. With regards to the rejection of claim 9 under 35 U.S.C. §102(b) as being anticipated by Frenzl US 3,823,872 the applicant argues that Frenzl does not teach a first tapering section of hollow frustoconical shape. However the examiner notes that the applicant does in fact identify element 2a as being a converging cone with a tapering frustoconical shape. The applicant attempts to argue that since element 2a is disposed within element 17 and element 17 does not have a frustoconical shape that Frenzl does not teach the limitations as claimed. The examiner notes that although the previous examiner identified element 17 as teaching the cited limitation it is well within the realm of reasonable interpretation consider element 2a to be part and parcel to any reference to element 17 thus a proper rejection on the merits. The current examiner has modified the previous rejection in order to specifically point out the exact component within element 17 of Frenzel that teaches a first tapering section of hollow frustoconical shape but this does not forms a new ground for rejection of the specified limitation. The examiner notes however that any argument by the applicant this final office action is based on an improper final rejection of claim 9 cannot be supported in light of the amendments to the remaining limitations of claim 9.

15. Applicant's arguments with respect to claims 10-12 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEONARD J. WEINSTEIN whose telephone number is (571)272-9961. The examiner can normally be reached on Monday - Thursday 7:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on (571) 272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Devon C Kramer/
Supervisory Patent Examiner, Art
Unit 3746

/Leonard J Weinstein/
Examiner, Art Unit 3746